## AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended): A device for diagnostic NO measurements, ~~characterized in that~~ ~~said~~ the device ~~comprises~~ comprising:

   - a NO sensor[[,]];
   - an inlet configured to accept an exhalation air at an exhalation flow rate ~~through which a patient exhales at an exhalation flow rate and pressure,~~;
   - a NO scrubber connected to the inlet[[,]];
   - a flow regulator connected to the inlet for controlling the exhalation flow exhaled by the patient[[,]];
   - a buffer chamber for temporarily storing a sample of the exhalation air; ~~exhaled air,~~ and
   - means for feeding the ~~said~~ sample of the exhalation air from the buffer chamber to the ~~said~~ NO sensor at a ~~flow rate~~ suitable flow rate for the NO ~~said~~ sensor, wherein the suitable flow rate for the NO sensor is lower than the exhalation flow rate.

2. (Currently amended): ~~A~~ The device according to claim 1, wherein the flow regulator is connected to the buffer chamber and is configured control the flow rate of the exhalation air to the buffer chamber at a rate of 20-800 ml/s ~~is connected to the inlet and the buffer chamber for controlling the exhalation flow exhaled by the patient~~.

3. (Currently amended): The device according to claim 1, wherein the suitable flow rate for the NO sensor is ~~means for feeding said portion of the sample to said NO sensor operates to create a steady flow of~~ about 0.5 to 15 ml/s ~~10 ml/s during a time period longer than the duration of the exhalation~~.

4. (Previously Presented): The device according to claim 1, wherein the device comprises means for equalizing the humidity of the sample.

5. (Previously Presented): The device according to claim 4, wherein said means for equalizing the humidity of the sample comprises a length of tube, made from a catalytic membrane material.

6. (Previously Presented): The device according to claim 1, wherein the device further comprises control electronics for verifying the parameters of the inhalation and controlling the parameters of exhalation.

7. (Previously Presented): The device according to claim 6, wherein said control electronics comprise a pressure sensor and means for giving feedback to the patient.

8. (Previously Presented): The device according to claim 6, wherein said control electronics further comprise a flow sensor and means for controlling the flow and/or giving feedback to the patient.

9. (Previously Presented): The device according to claim 6, wherein said control electronics further comprise a pressure sensor capable of measuring absolute pressure in order to make it possible to compensate for varying partial pressure of NO depending on variations in ambient pressure.

10. (Cancelled)

11. (Previously Presented): The device according to claim 1, wherein the buffer chamber comprises a cylinder with a movable piston.

12. (Previously Presented): The device according to claim 1, wherein the buffer chamber comprises a length of tube.

13. (Previously Presented): The device according to claim 1, wherein the device comprises the NO-scrubber through which a patient inhales directly prior to exhaling into the device, thus ensuring that the dead space of the respiratory tract of the patient is filled with NO-free air.

14. (Previously Presented): The device according to claim 1, wherein the device further comprises an interface for receiving a smartcard on which data linked to a specific user can be stored, and onto which measurement data can be recorded, and wherein the smartcard comprises a computer readable medium.

15. (Original): The device according to claim 14, wherein the device is capable of adapting to different users or different user groups, based on the data stored on the smartcard.

16. (Original): The device according to claim 1, wherein said NO sensor is an electrochemical sensor.

17. (Cancelled).

18. (Previously Presented): A smartcard suitable for use in a device according to claim 1, wherein said smartcard comprises a computer readable medium, said smartcard carrying data concerning an individual patient or patient group, wherein at least the following data are recorded on said smartcard:

    date and time of measurement;
    measured $FE_{NO}$;
    sensor ID No; and
    device ID No.

19. (Previously Presented): A method for diagnostic NO measurements using a device comprising a NO sensor, wherein:

    a patient inhales through said device comprising a NO sensor, the device further comprising a NO scrubber,

said patient exhales air into said device, wherein an exhalation flow rate and pressure is controlled to a preset value,

a sample of the exhaled air from said patient is temporarily stored in a buffer chamber,

said sample is fed to said NO sensor at a flow rate suitable for said sensor, and

an NO concentration is determined in said sample, wherein the flow rate suitable for said sensor is lower than the exhalation flow rate.

20. (Original): A method according to claim 19, wherein the patient inhales NO-free air prior to exhaling into the device.

21. (Previously Presented): A method according to claim 19, wherein the patient inhales through ~~a~~ the NO-scrubber integrated in said device, supplying NO-free air to the patient, prior to exhaling into the device.

22. (Original): A method according to claim 19, wherein the patient is given audible or visual feedback during the inhalation and exhalation steps, in order to support the correct performance of said steps.

23. (Currently amended): A method according to claim 19, wherein the exhalation flow rate is controlled to a value of about 20 to 800 ml/s and the rate at which the sample is fed to the sensor is about 0.5 to ~~10~~ 15 ml/s.

24. (Original): A method according to claim 19, wherein said NO sensor is an electrochemical sensor.

25. (Cancelled).

26. (Currently amended): A method according to claim 19, wherein the device comprising a NO sensor further comprises a user interface, wherein at least one of the following steps is included:

the patient enters information relating to his/her intake of a medicament into the user interface; and

the patient subjectively assesses his/her state of health and enters corresponding information into the user interface.

27. (Previously Presented): A computer program comprising instructions for performing the method according to claim 19, wherein the instructions are stored in a computer-readable medium.

28. (Cancelled).

29. (Currently amended): A method ~~Method~~ for the diagnostic determination on NO in a gas sample, the method comprising the steps of:

introducing a sample at a first flow rate into the device of claim 1;

storing said sample in the buffer chamber temporarily;

feeding said sample to the NO sensor at a second flow rate;

wherein the first flow rate is higher than the second flow rate and wherein the first flow rate is higher than optimal for the NO sensor.

30. (New): The device according to claim 2, wherein the flow regulator is configured control the flow rate of the exhalation air to the buffer chamber at a rate of 45-55 ml/s.

31. (New): A method for determining NO in a gas sample, the method comprising:

- receiving a gas sample comprising NO at a first flow rate;
- storing said sample in a buffer chamber temporarily; and
- feeding said sample to an NO sensor at a second flow rate,

wherein the first flow rate is higher than the second flow rate and wherein the first flow rate is higher than optimal for the NO sensor.